

Work Order ID 70228



Page 1

Wednesday, June 01, 2011 8:48:26 AM

Item ID: DSI 9379-013

Accept



Setup Start



Revision ID:

Item Name: Cargo Mirror Upgrade

Stop



Start Date: 6/1/2011 Start Qty: 1.00



Cust Item ID:

Customer:

Ship today

Required Date: 6/1/2011 Req'd Qty: 1.00

Reference:

Approvals:

Process Plan:

MF

Date:

11-06-01

Tooling:

Date:

Run Start



QC:

Date:

SPC (Y/N):

Date:

Stop



Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

Draw Nbr

Revision Nbr

DSI 9379

C

100

0.00



DOCUMENT CONTROL

DC

Memo

0.00

Document Control

Photocopy DSI 9379 and create labels per PPP DSI 9379-011 CHG001

8/6/01

105

Pick Kit

0.00



Packaging

Memo

0.00

Packaging

11/6/1 2000

110

QC4- 100% Inspect kits for completeness

0.00



QC

Memo

0.00

Quality Control

8/6/01

82

W/O:		WORK ORDER CHANGES							
DATE	STEP	PROCEDURE CHANGE		By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector	

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)							
DATE	STEP	Description of NC Section A	Corrective Action		Section B		Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng		Sign & Date			

NOTE: Date & initial all entries

Work Order ID 70228

Wednesday, June 01, 2011 8:48:26 AM



Page 2

Item ID: DSI 9379-013

Accept



Setup Start



Revision ID:

Stop



Item Name: Cargo Mirror Upgrade

Start Date: 6/1/2011 Start Qty: 1.00



Cust Item ID:

Required Date: 6/1/2011 Req'd Qty: 1.00



Customer:

Reference:

Run Start



Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Stop



QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
120		0.00							
	Packaging								
Packaging	Memo	0.00							
Packaging	Identify and pack for shipping as per PPP DSI 9379-011								
130		0.00							
	QC21- Final Inspection - Work Order Release								
QC	Memo	0.00							
Quality Control									

R20A

11/6/11

CK 11/06/11

MF

11-06-01

W/O:		WORK ORDER CHANGES						
DATE	STEP	PROCEDURE CHANGE		By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)							
DATE	STEP	Description of NC Section A	Corrective Action		Section B		Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng		Sign & Date			

NOTE: Date & initial all entries

Picklist Print

Wednesday, June 01, 2011 8:48:23 AM

Page 1

Work Order ID: 70228

Parent Item: DSI 9379-013

Parent Item Name: Cargo Mirror Upgrade

Start Date: 6/1/2011


Required Date: 6/1/2011

Start Qty: 1.00



Required Qty: 1.00

Comments: IPP rev A 10.02.16 new issue EC verified by:DD


Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
---------------------------------	------------------------	---------------	-------------	---------------------	------------------	-----------------	--------------------	----------------	-------------	--------------	---------------	----------------	--------

AN4-5A		Purchased	No			100	Each	297.0000	2	24			
													
Bolt													

Location	Loc Qty	Loc Code
ST355	200	
117508	200	
ST356	97	
116191	47	
116549	50	

AN960JD416	NAS1149D0463J	Purchased	No			100	Each	0.0000	4	48			
													
Washer													
D4070-041		Manufactured	No			100	Each	29.0000	2	24			
													
Clamp													

Location	Loc Qty	Loc Code
ST460	29	
64415	3	
68831	26	

MS21042L4		Purchased	No			100	Each	5,883.000	2	24			
													
Nut													

Location	Loc Qty	Loc Code
ST300	5883	
116823	583	
117441	3000	
117601	800	
117885	1500	

Melanie Reske is not out

M1160255

11/6/15 (20)

W/O:		WORK ORDER CHANGES						
DATE	STEP	PROCEDURE CHANGE		By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)							
DATE	STEP	Description of NC Section A	Corrective Action		Section B		Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng		Sign & Date			

NOTE: Date & initial all entries

DART SERVICE INSTRUCTION

TO AMEND INSTALLATION INSTRUCTIONS D350-561 REV. C **REFERENCE ONLY**

REF. CANADIAN STC: SH91-20 ISSUE 2

REF. FAA STC: SH856NE

To reduce vibration, Dart has developed the D350-561-141/-143 Mirror Installations to replace the D350-561-041/-043 Mirror Installations. For customers with D350-561-041/-043 Mirror Installations at CHG 005 or earlier who would like to upgrade their installation, the DSI 9379-011 Upgrade Kit can be obtained from Dart. The components for DSI 9379-011 Kit are as defined in Section 1.0 below.

Customers upgrading their installation from D350-561-041/-043 to D350-561-141/-143 should follow instructions given in Figures 1 through 5 of DSI 9379 and refer to Installation Instructions D350-561 Rev. C as applicable.

Customers who are installing a D350-561-141/-143, should refer to Figures 2 through 5 of DSI 9379 and refer to Installation Instructions D350-561 Rev. C as applicable.

This service instruction details the D350-561-141/-143 kits at CHANGE 003 or later, which use D4070-041 Clamps (replaces MS21919WDG7 clamps). For -141/-143 kits at earlier change numbers, the DSI-9379-013 Upgrade kit is available to replace the mil-spec clamps with more robust D4070-041 Clamps.

1.0 PARTS LIST

Qty -141	Qty -143	Qty -045	Qty -011	Qty -013	Part Number	Description
X	1				D350-561-141	SINGLE MIRROR INSTALLATION (REPLACES -041)
	X				D350-561-143	DUAL MIRROR INSTALLATION (REPLACES -043)
	1	X			D350-561-045	MIRROR KIT
			X		DSI-9379-011	UPGRADE KIT
				X	DSI-9379-013	UPGRADE KIT
1		1			D2011-101	MIRROR
1					D2012-105	ARM
1					D2012-107	CLEVIS
1					D2012-111	BRACKET
		2			D2012-113	CLAMP
1					D2012-115	BRACKET
2					D2022-101	SPACER
1*		1*			D3014-1	LOCKNUT
1			1		D3629-1	BRACKET
1			1		D3635-1	GASKET
2			2		D3635-3	GASKET
1			1		D3646-1	ARM
1			1		D3646-3	ARM
2			2	2	D4070-041	CLAMP
3			3		AN3-4A	BOLT
1					AN3-6A	BOLT
3			2	2	AN4-5A	BOLT
1					AN4-10A	BOLT
8			6		AN960JD10	WASHER
8			4	4	AN960JD416	WASHER
1*		1*			AN960JD416L	WASHER
4			3		MS21042L3	NUT (OR MS21042-3)
4			2	2	MS21042L4	NUT (OR MS21042-4)

*INCLUDED AS PART OF D2011-101 MIRROR

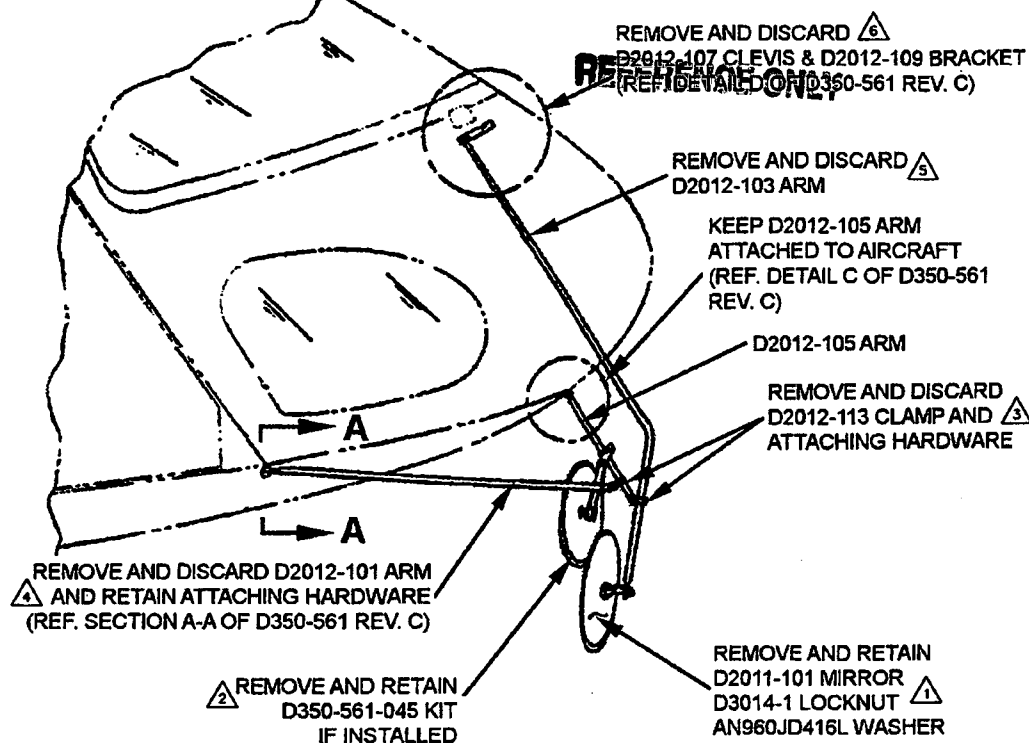
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DAO # 01-Q-01

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BY: *[Signature]*
D. SHEPHERD (DE # 02)

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ISSUE NO.: 2

C	D4070-041 WAS MS21919WDG7	CP	10.02.12
B	MS21919WDG7 WAS MS21929WDG7	DC	07.11.28
A	NEW ISSUE	MB	07.07.10
REV.	DESCRIPTION	BY	DATE
DESIGN		DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA DRAWING NO. DSI 9379 REV. C SHEET 1 OF 5 TITLE CARGO MIRROR UPDRAGE KIT SCALE NTS COPYRIGHT © 2007 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.	
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APPROVED			
DE APPR.			
DATE	10.02.12		



**FIGURE 1: REMOVAL OF D350-561-041/-043
FOR CONVERSION TO D350-141/-143**

**2.0 REMOVAL (IF CONVERTING FROM -041/-043 TO -141/-143 USING
DSI 9379-011)**






- 1) REMOVE AND RETAIN D2011-101 MIRROR AND ATTACHING FASTENERS.
- 2) REMOVE AND RETAIN D350-561-045 KIT.
- 3) REMOVE AND DISCARD D2012-113 CLAMPS AND ATTACHING
HARDWARE (2 PLACES).
- 4) REMOVE AND DISCARD D2012-101 ARM. LEAVE D2012-115 BRACKET
AND HARDWARE ATTACHED TO THE AIRCRAFT.
- 5) REMOVE AND DISCARD D2012-103 ARM.
- 6) REMOVE AND DISCARD D2012-107 CLEVIS. AT THE INSTALLER'S
DISCRETION, THE D2012-109 BRACKET CAN BE REMOVED OR CAN
REMAIN INSTALLED. WHETHER OR NOT THE D2012-109 BRACKET IS
BEING REMOVED, ENSURE BOTH SCREWS ARE RE-INSTALLED.

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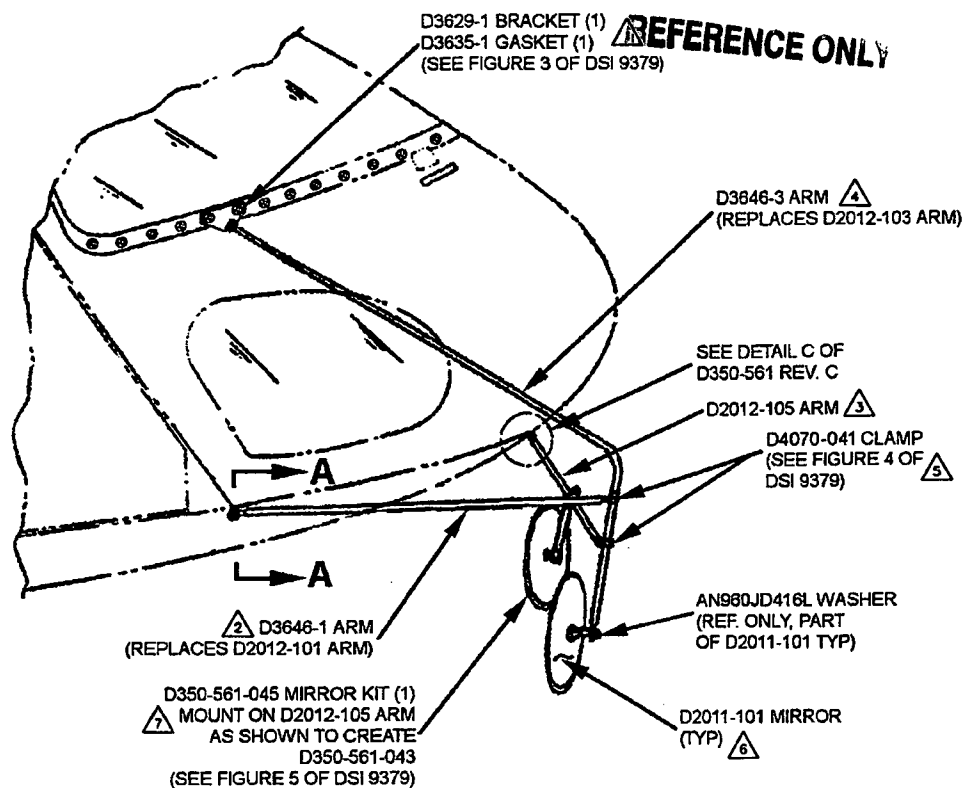


FIGURE 2: D350-561-141/-143 INSTALLATIONS

3.0 INSTALLATION

- 1) INSTALL D3629-1 BRACKET AND D3635-1 GASKET USING EXISTING SCREWS ON WINDOW. IT IS ACCEPTABLE TO SUBSTITUTE SCREWS WITH LONGER SCREWS OF SAME TYPE.
- 2) INSTALL D3646-1 ARM PER SECTION A-A OF D350-561 REV. C. **NOTE:** D3646-1 REPLACES D2012-101.
- 3) INSTALL D2012-105 ARM PER DETAIL C OF D350-561 REV. C.
- 4) INSTALL D3646-3 ARM. **NOTE:** D3646-3 REPLACES D2012-103.
- 5) ATTACH D3646-1 ARM AND D2012-105 ARM TO D3646-3 ARM USING D4070-041 CLAMPS.
- 6) MOUNT D2011-101 MIRROR ONTO D2012-103 ARM.
- 7) IF INSTALLING THE D350-561-143 KIT, INSTALL D350-561-045 MIRROR KIT PER FIGURE 5 OF DSI 9379.

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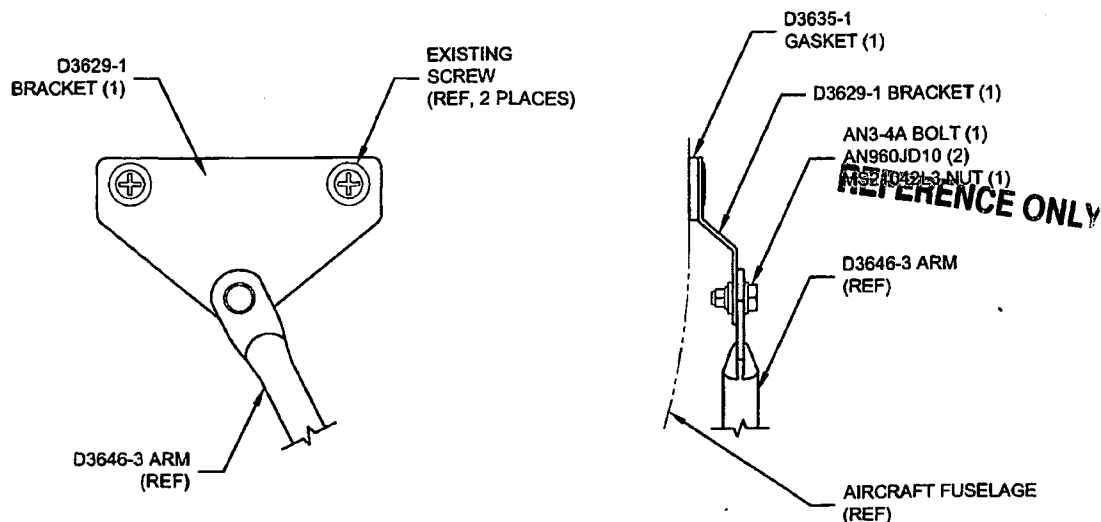


FIGURE 3: D3629-1 BRACKET/D3646-3 ARM INSTALLATION

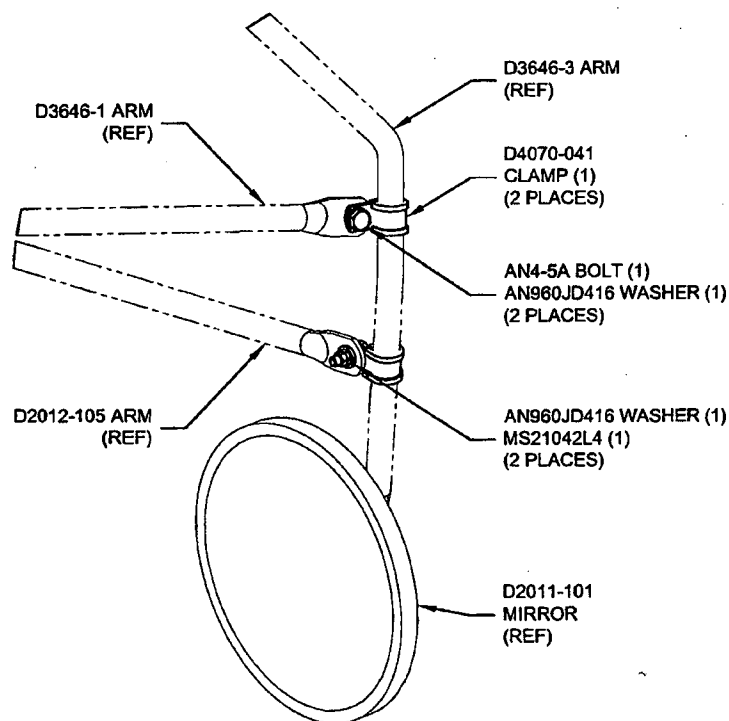


FIGURE 4: D4070-041 CLAMP INSTALLATION

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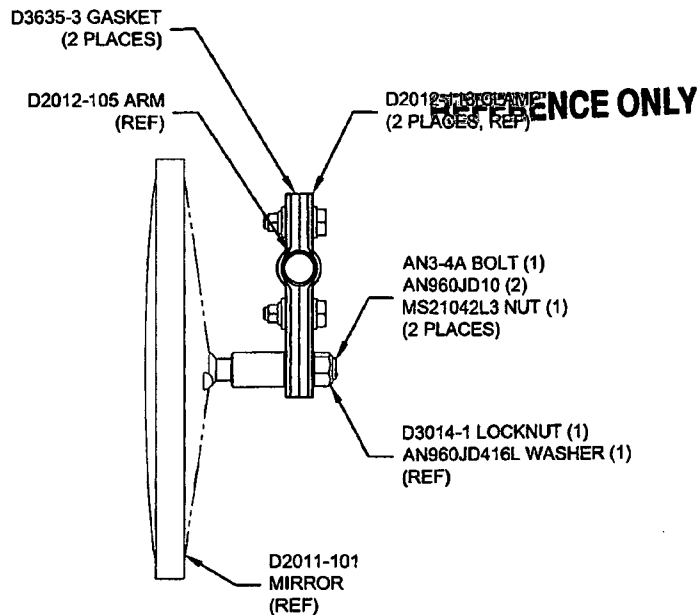


FIGURE 5: D350-561-045 INSTALLATION

4.0 WEIGHT AND BALANCE

The following is the weight and balance information for the **D350-561-141 Single Mirror Kit** and the **D350-561-143 Dual Mirror Kit**.

Installation	Weight	LATERAL		LONGITUDINAL	
		Arm	Moment	Arm	Moment
D350-561-141	2.5 lb	+36.1 in	+90.3 in-lb	9.0 in	22.5 in-lb
Single Mirror Installation	1.1 kg	+0.92 m	+1.0 m-kg	0.23 m	0.25 m-kg
D350-561-143	3.2 lb	+36.1 in	+115.5 in-lb	8.8 in	28.2 in-lb
Dual Mirror Installation	1.5 kg	+0.92 m	+1.4 m-kg	0.22 m	0.33 m-kg

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